The Dow Chemical Company
Toxicology & Environmental
Research and Consulting
1803 Building
Midland, MI 48674

29 March 2007

Mark W. Townsend, Chief
HPV Chemicals Branch
U.S. Environmental Protection Agency

201-16565A

Dear Mr. Townsend,

The Dow Chemical Company received EPA's comments regarding the test plan and robust data summary for Chlorinated C3 Stream (CASRN 68390-96-5) and is pleased to respond. We have considered the recommended revisions to the compositional analysis, analog justification, physicochemical properties and environmental fate, health effects, and ecological effects. We have revised our submission as indicated on the attached summary sheet. Also included with this submission is a revised test plan. No changes were made to the IUCLID dossier.

With this submission, The Dow Chemical Company has completed the required data set and believes the commitment for this chlorinated stream to have been fulfilled.

Kind Regards,

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Response to EPA Comments:
Chlorinated C3 Stream (CASRN 68390-96-5)

EPA Comment: The submitter needs to provide a complete compositional analysis of the C3 chlorinated hydrocarbon stream (Chloro C3 stream) that specifies the remaining 20% of the components… The submitter states that the Chloro C3 stream "consists of several chlorinated 3-carbon chemicals which are produced as intermediate stream from several manufacturing product lines" with the largest components, 1,2-dichloropropane (approximately 65%), trichloropropene (unspecified isomer – approximately 8%) and 2-chloropropene (approximately 6.5%). The remaining 20% of the stream is composed of a number of chlorinated propenes "with no other single component present at more than a 5% of the total stream." Although the submitter notes that the composition of this substance is "somewhat variable", the test plan does not provide a typical analysis of the stream so that the importance of each component can be independently assessed. Such information needs to be included in the test plan.

Dow Response: The composition of the chlorinated stream is highly variable. The original test plan submission indicated that PDC, trichloropropene, and 2-chloropropene were the three main components of the stream. Subsequent changes in the composition of stream have occurred since the 2005 submission of the test plan, and a revised test plan accompanies this correspondence. The 2006 stream was reported to contain 1,2-dichloropropane (CASRN 78-87-5; 85% wt maximum), 2,3-dichloropropene (CASRN 77-88-6; 5% wt maximum), 2,2-dichloropropane (CASRN 594-20-7; 5.5% maximum); and 3,3-dichloropropene (CASRN not assigned; 5% wt maximum). The remaining CAS 68390-96-5 C3 Chlorinated Hydrocarbon Stream is composed of other chlorinated propenes with no other single component present at more than 4% of the total stream. The composition of the stream cannot be characterized with any certainty or reproducibility. As such, Dow is not able provide any further composition information. Additionally, this stream is an intermediate which is chemically and/or thermally destroyed to produce another chemical substance.

EPA Comment: The submitter needs to provide additional information and/or data to support its position that 1,2-dichloropropane will adequately represent other components in the stream and the stream as a whole for health effects purposes. For most other endpoints, the submitted data for 1,2-dichloro-propane do not adequately represent the sponsored chemical.

Dow Response: The Submitter has provided additional data on 2,3-dichloropropene and 2,2-dichloropropane in the test plan for comparison to PDC, reflecting the change in the stream composition since the 2005 submission. Dow is unable to provide further composition information with any reasonable degree of accuracy. The composition of the chlorinated stream is highly variable. The four major components (nearly 100% of the stream) have been identified in the test plan and comparative toxicity data have been offered on the three components representing the highest percent of the stream.

Sufficient data of acceptable quality were unavailable for 3,3-dichloropropene (5% of stream).

EPA Comment: The submitted physicochemical and environmental fate data for 1,2-dichloropropane do not adequately represent those characteristics of the sponsored chemical. The quantities of other components in the mixture (8% 1,2-trichloropropene, 6.5% 2-chloropropene, and approximately 20% unidentified alkenes) are sufficient to influence these properties. Therefore, the submitter needs to provide physicochemical and environmental fate data for at least 2-chloropropene and 1,1,2-trichloropropene.

Dow Response: The composition of the chlorinated stream is highly variable. The original test plan submission indicated that PDC, trichloropropene, and 2-chloropropene were the three main components of the stream. Subsequent changes in the composition of stream have occurred since the 2005 submission of the test plan (see enclosed). The 2006 stream was reported to contain 1,2-dichloropropane (CASRN 78-87-5; 85% wt maximum), 2,3-dichloropropene (CASRN 77-88-6; 5% wt maximum), 2,2-dichloropropane (CASRN 594-20-7; 5.5% maximum); and 3,3-dichloropropene (CASRN not assigned; 5% wt maximum). The remaining CAS 68390-96-5 C3 Chlorinated Hydrocarbon Stream is composed of other chlorinated propenes with no other single component present at more than 4% of the total stream. The composition of the stream cannot be characterized with any certainty or reproducibility. As such, Dow is not able provide any further composition information.

The Submitter asserts that the most accurate physicochemical data for the stream is represented by PDC, which comprises up to approximately 85% of the stream.

EPA Comment: EPA reserves judgment on the adequacy of the data submitted for 1,2-dichloropropane to characterize the mammalian toxicity of the Chloro C3 stream pending receipt of adequate justification for that approach…. The submitted data for 1,2-dichloropropane do not represent chloroalkenes and other unidentified components present in the stream. The quantities of other components in the mixture (8% 1,2-trichloropropene, 6.5% 2-chloropropene, and approximately 20% unidentified alkenes) are significant enough to influence the ecotoxicological properties of the sponsored chemical. The submitter needs to provide data on the commercial mixture to address these endpoints.

Dow Response: The Submitter respectfully offers again that the composition of the chlorinated stream is highly variable. The original test plan submission indicated that PDC, trichloropropene, and 2-chloropropene were the three main components of the stream. Subsequent changes in the composition of stream have occurred since the 2005 submission of the test plan (see enclosed). The 2006 stream was reported to contain 1,2-dichloropropane (CASRN 78-87-5; 85% wt maximum), 2,3-dichloropropene (CASRN 77-88-6; 5% wt maximum), 2,2-dichloropropane (CASRN 594-20-7; 5.5% maximum); and 3,3-dichloropropene (CASRN not assigned; 5% wt maximum). The remaining CAS

68390-96-5 C3 Chlorinated Hydrocarbon Stream is composed of other chlorinated propenes with no other single component present at more than 4% of the total stream. The composition of the stream cannot be characterized with any certainty or reproducibility. As such, Dow is not able provide any further composition information.

The Submitter has provided data on 2,3-dichloropropene and 2,2-dichloropropane in the test plan for comparison to PDC. The composition of the chlorinated stream is highly variable. The four major components (approximately 100% of the stream) have been identified in the test plan and comparative toxicity data have been offered on the three components representing the highest percent of the stream. Sufficient data of acceptable quality were unavailable for 3,3-dichloropropene (5% of stream).

Further, the adequacy of the data submitted for PDC has been documented by the OECD, and it is hoped that the same such data would be found acceptable by the Agency.